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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/615,281	07/13/2000	James A. Folta	CIL-10514	3829

7590 06/30/2004
JOHN P. WOOLDRIDGE, ESQ,
535 LIPOA PARKWAY
SUITE 110
KIHAI, HI 96753

EXAMINER

GARLAND, STEVEN R

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/615,281

Applicant(s)

FOLTA, JAMES A.

Examiner

Steven R Garland

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, line 10, " said dynamic mask " lacks a proper antecedent basis. The dependent claims 12-18 fall with parent claim 11.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,3-6,8-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Bruijn et al. " Automatic electron-beam deposition of multilayer soft x-ray coatings with laterally graded d-spacing" cited by applicant.

Bruijn teaches depositing graded or uniform films on a substrate using vapor deposition. Bruijn teaches computer control of a moveable mask, moving the mask in a linear direction, use of a shaped hole slit mask, and programming software to control motion. See the abstract; and pages 916-920. Note pages 917-918.

Bruijn however does not expressly state that the computer controls acceleration and velocity during positioning of the mask; and that the thickness does not vary more than .1% across the substrate.

It would have been obvious to one of ordinary skill in the art to modify Bruijn to have the computer control the acceleration and velocity of mask so that it can be accurately positioned and also prevent damage to the mask and/or actuators.

Further it would have been obvious to one of ordinary skill in the art to modify Bruijn to control the deposition using the mask so that the most uniform layer with the smallest tolerance can be formed, since this is the ultimate goal in forming a uniform layer.

In response to applicant's arguments, Bruijn expressly teaches on page 919, second column, variable velocity scanning which requires that acceleration be controlled otherwise the velocity would not vary.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruijn et al. "Automatic electron-beam deposition of multilayer soft x-ray coatings with laterally graded d-spacing" cited by applicant in view of the acknowledged prior art of figures 2A and 2B and their description.

Bruijn teaches depositing graded or uniform films on a substrate using vapor deposition. Bruijn teaches computer control of a moveable mask, moving the mask in a linear direction, use of a shaped hole slit mask, and programming software to control motion. See the abstract; and pages 916-920. Note pages 917-918.

Bruijn however does not teach ion assisted deposition.

The acknowledged prior teaches ion assisted deposition for depositing multiple materials.

It would have been obvious to one of ordinary skill in the art to modify Bruijn in view of the acknowledged prior and use an ion assisted deposition scheme so that the composition of the deposited layer could be varied in the desired manner.

In response to applicant's arguments, Bruijn expressly teaches on page 919, second column, variable velocity scanning which requires that acceleration be controlled otherwise the velocity would not vary.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759. The examiner can normally be reached on Monday-Thursday from 6:30 to 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 703-308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAB

Steven R Garland
Examiner
Art Unit 2125

Albert W. Paladini 6-28-04
ALBERT W. PALADINI
PRIMARY EXAMINER